








KPB Series Regulators Maintenance Instructions



Kit Contents



Tools Required

Tool	Size	Component
	—	Body
	5/8 in. or 16 mm	Seat retainer
	11/16 in. or 17 mm	Stem nut
	2 in. or 50 mm	Cap ring
	Capable of 100 ft·lb (135 N·m, 13.8 m·kg)	Seat retainer, cap ring
	2 in. or 50 mm	Cap ring
Tool Kit		
	—	Piston seal and spring
	—	Body seal and spring

Symbols



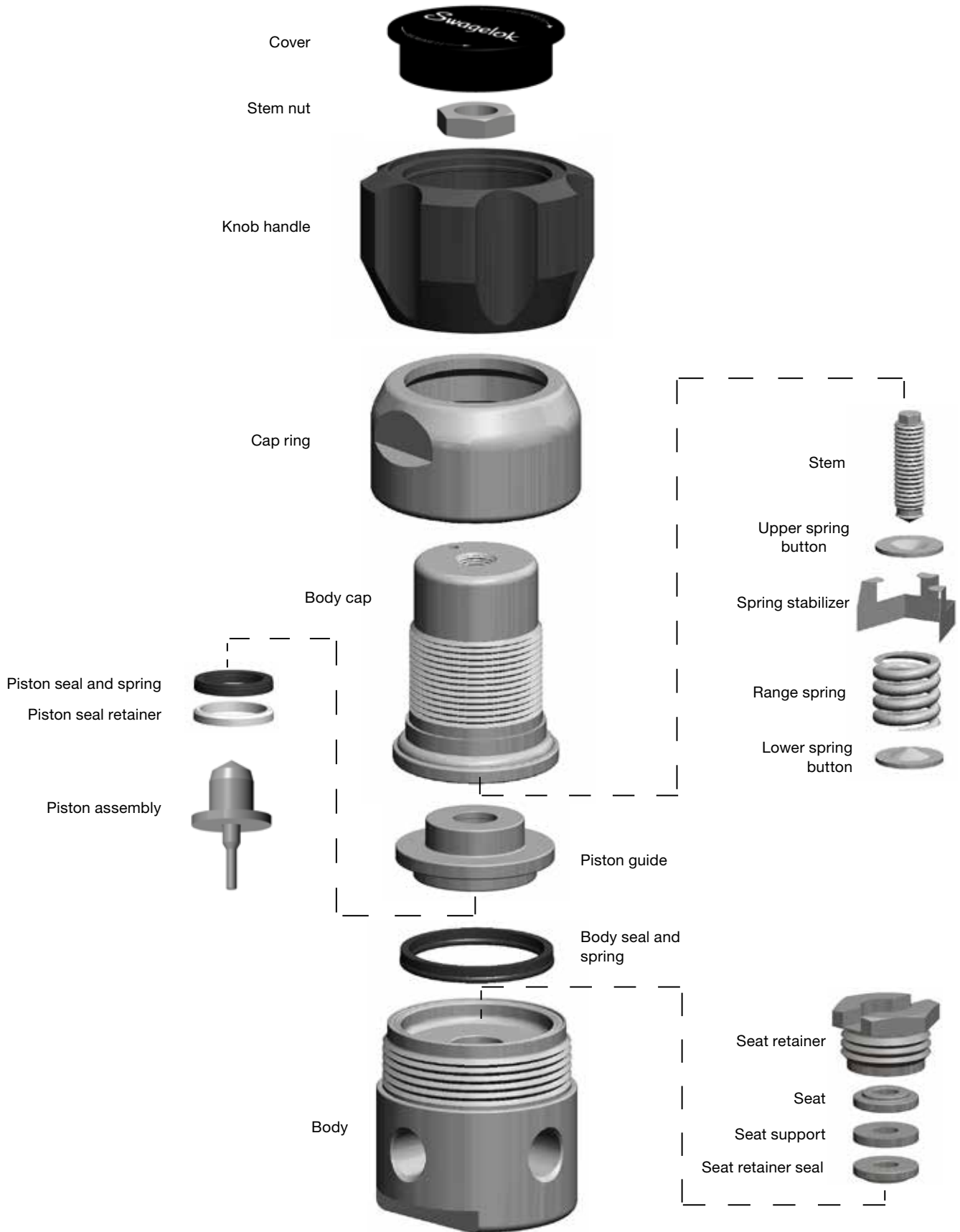
Discard



Lightly lubricate

NOTE: See *Pressure Regulators*, [MS-02-230](#), for tool kit ordering information.

Exploded View



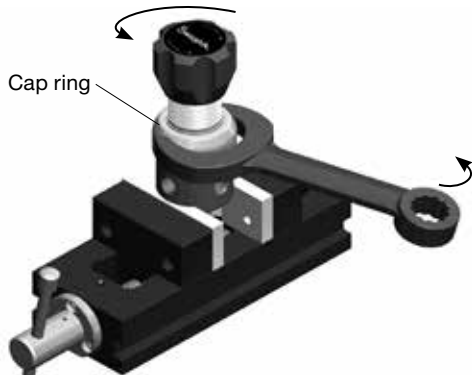
⚠ WARNING

Before removing a regulator from the system for service, you must

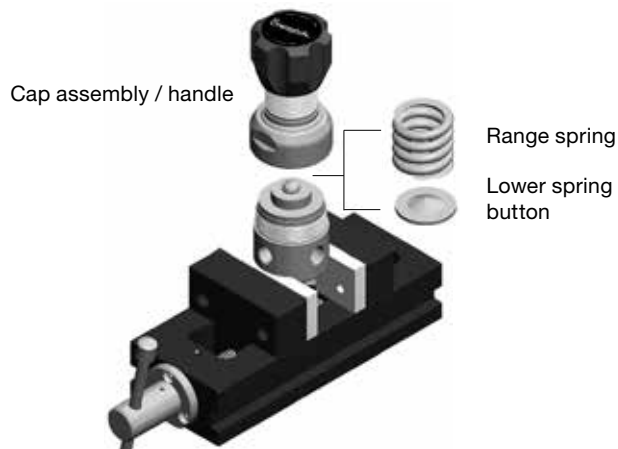
- depressurize the system
- purge the system to remove any residual system media left in the regulator.

Disassembly

1. Place the regulator in a vise.
2. Turn the **knob handle** counterclockwise until it stops.
3. Loosen the **cap ring**.



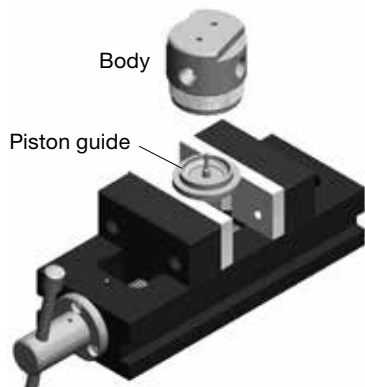
4. Remove the **cap assembly** and **handle** as one piece and set aside for later use.
Note: The **range spring** and the **lower spring button** may fall from the cap assembly. Set aside for later use.



5. Lightly grip the **piston guide** in the vise and remove the **body**.

NOTICE

Twist the body gently to avoid body seal and spring damage, which could result in leakage.



6. Push the **piston assembly** out of the **piston guide**.



7. Remove the **piston seal and spring** and the **piston seal retainer** from the **piston guide**, and the **body seal and spring** from the **body**.

NOTICE

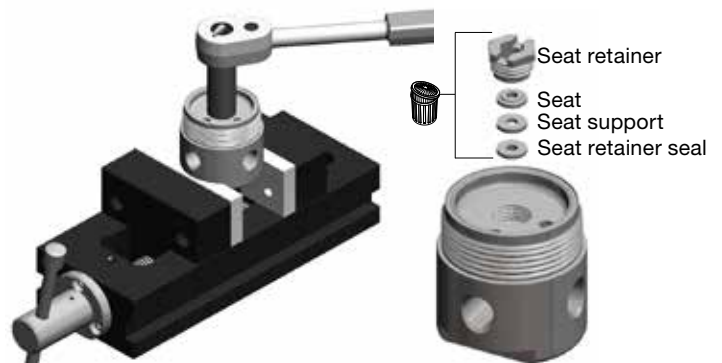
Be careful not to scratch the inside of the piston guide and the body. Leakage could result.



8. Loosen and remove the **seat retainer assembly**.

NOTICE

Be careful not to scratch the inside of the body. Leakage could result.

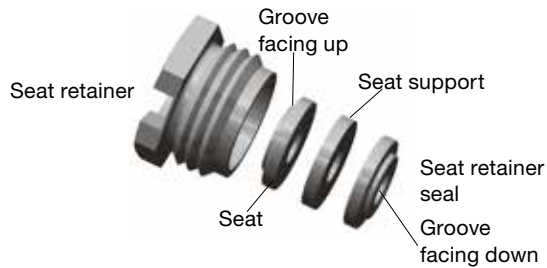


Reassembly

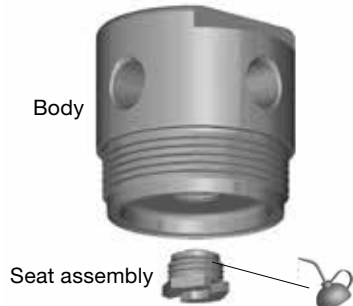
NOTICE

Ensure all parts and tools are free of debris or damage.

9. Insert the **seat**, the **seat support** and the **seat retainer seal** into the **seat retainer**.



10. In the inverted position, thread the **seat assembly** into the **body**.

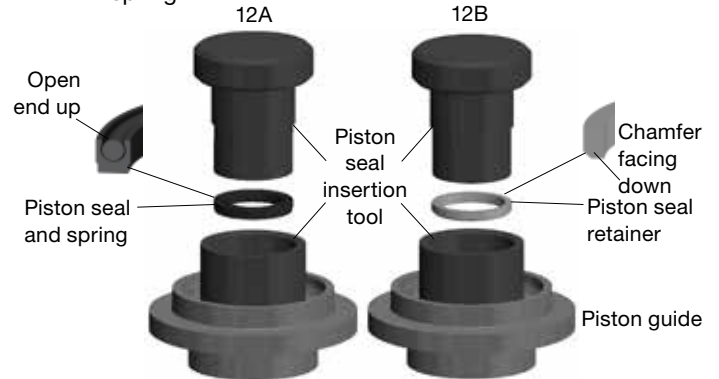


11. Tighten the **seat assembly** to 13 lb-ft (17.5 N·m, 1.8 m·kg).

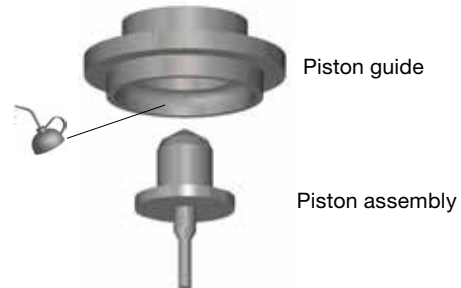


12. Insert the bottom of the **piston seal insertion tool** into the **piston guide**. Insert the **piston seal and spring** into the piston guide and use the top part of the piston seal insertion tool to press the seal into place (12A). Then insert the **piston seal retainer**, pressing it into place using the top part of the piston seal insertion tool (12B).

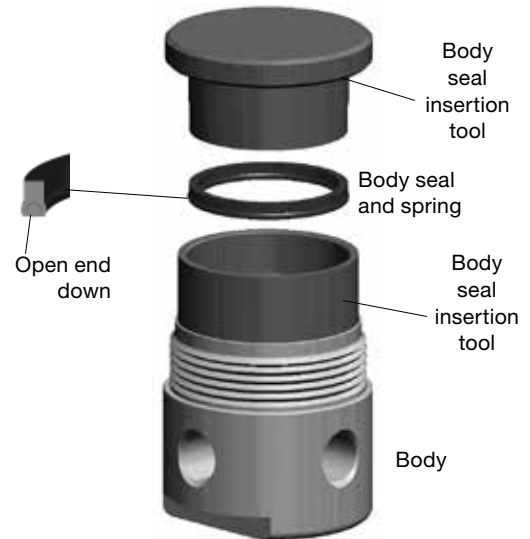
Note: The open end of the **piston seal and spring** should be facing up and the chamfer of the **piston seal retainer** should be placed against the piston seal and spring.



13. Push the **piston assembly** into the **piston guide**.



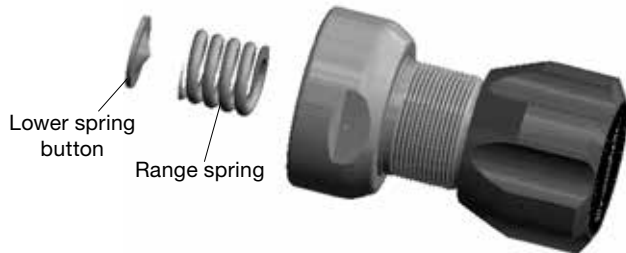
14. Insert the bottom of the **body seal insertion tool** into the **body**. Insert the **body seal and spring** into the body and use the top part of the body seal insertion tool to press the seal into place.



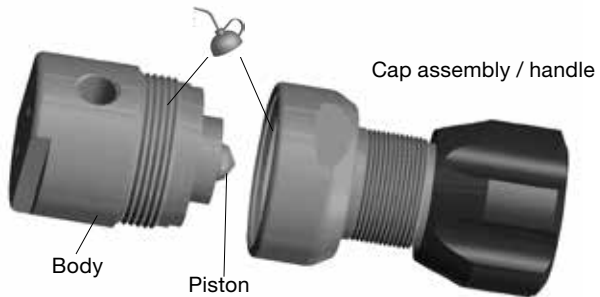
15. Push the **piston guide** onto the body until it fully engages with the **body seal and spring**.



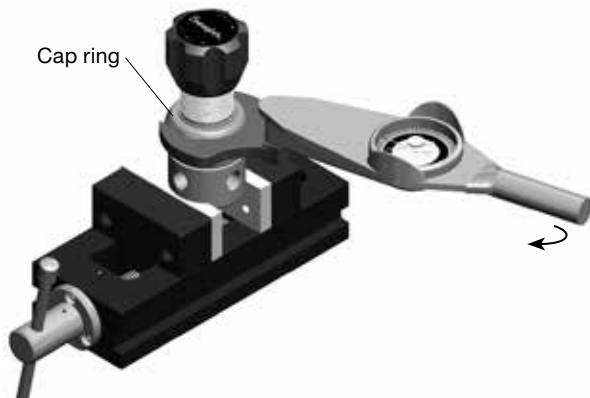
16. Insert the **range spring** into the cap and then the **lower spring button** with the point towards the range spring.



17. Thread the **cap assembly / handle** onto the **body** with the lower spring button resting on the **piston**.



18. Tighten the **cap ring** to 100 ft·lb (135 N·m, 13.8 m·kg).



19. Test the regulator for proper operation.

For additional information, see www.swagelok.com.